

Amendment to the claims:

Please cancel claims 6, 24 and 25.

Please amend claim 26 to read as follows:

26. A direct current (DC) power injector circuit for a remote
bidirectional switched RF amplifier, comprising:

a source of direct current connected to said remote bi-directional switched RF
amplifier through a current sensor,

a connection from said current sensor through a capacitor to a radio transceiver,

said current sensor comprises a power resistor with two terminals in series
between said source of direct current and said remote bidirectional switched RF
amplifier,, and,

a differential voltage comparator is connected across said power resistor
terminals to determine the operational mode of said remote bidirectional switched RF
amplifier.

This following listing of claims will replace all prior versions, and listings, of claims in
the

Listing of Claims:

Claim 1 (withdrawn): In a telecommunication device having a signal input, an electrostatic overvoltage protection device, comprising:

a conductor connected between said signal input and a source of reference potential.

Claim 2 (withdrawn): The electrostatic overvoltage protection device of Claim 1 wherein:

said conductor has a length selected to be one quarter of the wavelength of a desired signal band frequency, and

the source of reference potential is a ground potential.

Claim 3 (withdrawn): The electrostatic overvoltage protection device of Claim 2, wherein:

The conductor of one quarter wavelength is one of a trace on a circuit board and a wire.

Claim 4 (withdrawn): The electrostatic over voltage protection device of Claim 2, further comprising :

a T-connector having an external housing and with a through conductor between the main end terminals, and a side conductor connected at one end to the said through connector and at the other end to the side end terminal of said T-connector, and

a shorting structure connecting said other end of said side conductor to said T-connector external housing, wherein

said conductor of one quarter wavelength is measured from said one end of said side conductor to said shorting structure.

Claim 5 (withdrawn): The electrostatic overvoltage protection device of Claim 4 wherein:

said shorting structure further comprises a conductive cap with a conductive pin adapted to fit into said T-connector side end terminal and thus make electrical connection between the combination of said conductive pin and said side conductor and said T-connector external housing.

Claim 6 (canceled)

Claim 7 (withdrawn): A waterproof housing arrangement for an active electronic device having at least one external connection, comprising:

a housing containing said active electronic device which is waterproof on all sides except for the side containing said at least one external connection;

mounting said housing such that said side containing said at least one external connection is in a downward position.

Claim 8 (withdrawn): A waterproof housing arrangement for an active electronic device as in Claim 7, further comprising a first conductor connected to said at least one external connection, said first conductor forming a U-loop beneath said housing.

Claim 9 (withdrawn): A waterproof housing arrangement for an active electronic device as in Claim 8, further comprising:

a second external connection, said second external connection also being located on the downward side of said housing, and further being connected to a source of direct current power through a second conductor;

said first conductor leading away from said downward side of said housing and being connected to an antenna located adjacent said housing.

Claim 10 (withdrawn): A waterproof housing arrangement for an active electronic device as in Claim 9, wherein:

said antenna is located adjacent to said housing such that losses between said active electronic device and said antenna are negligible.

Claim 11 (withdrawn): A waterproof housing arrangement for an active electronic device as in Claim 7, wherein:

said housing is mounted to a pole.

Claim 12 (withdrawn): A waterproof housing arrangement for an active electronic device as in Claim 11, wherein:

said pole is in a vertical direction.

Claim 13 (withdrawn): A waterproof housing arrangement for an active electronic device as in Claim 12, wherein:

said housing is attached to said pole by a V-bolt fastener.

Claim 14 (withdrawn): A waterproof housing arrangement for an active electronic device as in Claim 12, wherein:

said housing is attached to said pole through an L-shaped bracket, said L-shaped bracket being attached to the top of said housing, and

a V-bolt fastener connecting said L-bracket to said pole.

Claim 15 (withdrawn): The waterproof housing arrangement for an active electronic device as in Claim 14 wherein:

said L-shaped bracket further being of sufficiently large size so as to overhang at least three vertical sides of said housing, to thus provide additional waterproofing to said housing.

Claim 16 (withdrawn): The waterproof housing arrangement for an active electronic device as in Claim 7, wherein:

said active electronic device is a bi-directional switched amplifier.

Claim 17 (withdrawn): A mounting arrangement for an external connection to an electrical circuit, comprising:

a housing,

a connector for said external connection, said connector protruding through a wall of said housing,

said connector having a flange, one side of said flange directly abutting the inside wall of said housing,

said electrical circuit being mounted on a substantially planar board having two sides, and

the other side of said flange of said connector abutting and being directly connected to one side of said planar board.

Claim 18 (withdrawn): The mounting arrangement for an external connection to an electrical circuit as in Claim 17, wherein:

said connector is a coaxial connector, and

the center contact of said coaxial connector protrudes through and is connected to the second side of said planar board, to provide for minimum VSWR from said coaxial connector to said planar board.

Claim 19 (withdrawn): The mounting arrangement for an external connection to an electrical circuit as in Claim 18, wherein:

said housing has a cover, and

said coaxial connector protrudes through an aperture in said cover.

Claim 20 (previously presented): A bi-directional switched RF amplifier, comprising:

an external connection to an antenna,

an external connection to a transceiver radio,

a transmitting (TX) amplifier,

a receiving (RX) amplifier,
said transmitting and said receiving amplifiers being arranged between said radio and antenna external connections,
a double pole, double throw switch, one switch pole connected to said radio external connection and the other switch pole being connected to said antenna external connection,
such that when said double pole, double throw switch is in one position the transmitting amplifier is disconnected from said external connections, and the input of said receiving amplifier is connected to said antenna external connection and the output of said receiving amplifier is connected to said radio external connection,
such that when said double pole, double throw switch is in the other position the receiving amplifier is disconnected from said external connections, and the input of said transmitting amplifier is connected to said radio external connection and the output of said transmitting amplifier is connected at said antenna external connection, and
said position of said double pole, double throw switch being controlled by a transmit power sense circuit.

Claim 21 (previously presented): A bi-directional switched RF amplifier as in claim 20, wherein:

said receiving amplifier is a low noise amplifier.

Claim 22. A bi-directional switched RF amplifier as in Claim 21, additionally comprising:

a bandpass filter connected between said antenna external connection and said

receiving amplifier input, and

pads, including attenuation pads, connected to at least one of said receiving amplifier output and said transmitting amplifier input.

Claim 23 (previously presented) A bi-directional switched RF amplifier as in Claim 20, wherein:

the powering for both said receiving amplifier and said transmitting amplifier is a source of DC potential applied through said external connection to a radio transceiver through a DC power injector.

Claim 24 (canceled)

Claim 25 (canceled)

Claim 26 (currently amended): A direct current (DC) power injector circuit for a remote bidirectional switched RF amplifier, comprising:

a source of direct current connected to said remote bi-directional switched RF amplifier through a current sensor,

a connection from said current sensor through a capacitor to a radio transceiver,

said current sensor comprises a power resistor with two terminals in series between said source of direct current and said remote bidirectional switched RF amplifier,, and,

a differential voltage comparator is connected across said power resistor

terminals to determine the operational mode of said remote bidirectional switched RF amplifier.

Claim 27 (currently amended): A direct current (DC) power injector circuit for a remote bidirectional switched RF amplifier as in Claim 26, further comprising:

a pair of indicator lights, only one of which will be on at any time, to thus indicate said operational mode, either receive RX or transmit TX, of said remote bidirectional switched RF amplifier.

Claim 28 (withdrawn): Temperature compensated RF sensing circuitry, comprising:

a first voltage reference connected between a power supply voltage and a reference potential,
a thermistor being connected to said first voltage reference to provide temperature compensation therefor,

the output of said first voltage reference connected to one end of a pair of series connected diodes, said output of said first voltage reference forward biasing said pair of series connected diodes in the forward direction to just below the point of conduction,

the common connection between said pair of serially connected diodes being coupled to an external source of radio frequency (RF) signal,

the other end of said pair of serially connected diodes being connected to a comparator circuit, wherein:

when the amplitude of the source of radio frequency signal is zero or below a predetermined threshold, this generates one state output of the comparator

circuit, and

when the amplitude of the source of radio frequency signal is at or above said predetermined threshold, this generates a second state output of the comparator circuit.

Claim 29 (withdrawn): A temperature compensated RF detection circuit as in Claim 28, wherein:

said source of radio frequency signal is a transceiver, remote from said temperature compensated RF detection circuit, and

said comparator circuit output states control a bi-directional switching radio frequency amplifier to control said amplifier into either a receive or a transmit condition.

Claim 30 (withdrawn): A temperature compensated RF detection circuit as in Claim 29, wherein:

a second voltage reference with an output is connected between a power supply voltage and a reference potential,

said comparator circuit comprises a pair of differential comparators, each with two inputs and an output respectively,

one input of each of said pair of differential comparators is connected to said output of said second voltage reference,

the other input of one of said pair of differential comparators is connected to said other end of said pair of serially connected diodes, and

the other input of the other of said pair of differential comparators is connected to the output of said one of said pair of differential comparators,

whereby only one of said pair of differential comparators has a High output at any time, thereby indicating said amplitude of said source of radio frequency signal.

Claim 31 (withdrawn): A temperature compensated RF detection circuit as in Claim 30, wherein:

said first and second voltage references comprise a plurality of serially resistors between said power supply voltage and said reference potential.

Claim 32 (withdrawn): A telecommunications system, comprising:

a remote bi-directional switched radio frequency (RF) amplifier in a waterproofed housing with an adjacently mounted antenna and a first connection to said antenna located on the lower side of said waterproofed housing,

a single radio frequency and direct current power line connected between a second connection to said lower side of said waterproofed housing and a direct current power injector removed from said antenna,

a radio transceiver connected to said direct current power injector, and,

a terminal device connected to said radio transceiver to communicate data through said system.

Claim 33 (withdrawn): A method of sensing the discrete operational states of a device remote from a direct current power supply powering said device, said discrete operational states each using different levels of electrical power, comprising:

putting the current being drawn by said device through a series connected resistor,

sensing the voltage drop across said resistor by a differential voltage comparator,
and
optically outputting the results of said comparator, said output indicating one of said
discrete operational states of said device.